

PSC-T42L

SELF-CONTAINED, 2-WIRE PYROMETER FOR INDUSTRIAL APPLICATIONS



OVERVIEW

The PSC-T42L is a simple, 1-color, 2-wire loop powered sensor that is designed to measure temperature of dull surface materials with on-board emissivity and a wide temperature range of -40°F to 1832°F (-40°C to 1000°C). The sensor is ideal for industrial and OEM machine building applications. It easily integrates into existing measurement and control systems with a linear 4 to 20 mA output signal. The PSC-T42L provides a fast response time, small spot size, and a stainless steel housing.

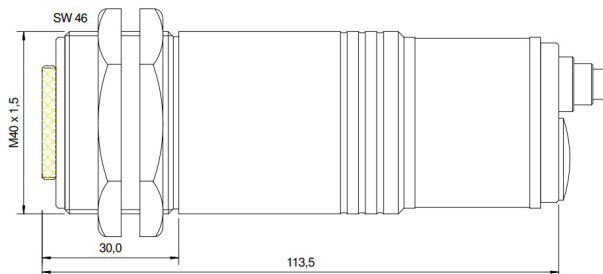
For use in harsh industrial environments, the rugged protective cooling jacket with air purge assembly is rated for ambient temperatures up to 200°C (392°F), with a full range of electrical, mechanical and optical accessories available.

APPLICATIONS

- Painted/coated metals
- Paper and packaging
- Building materials
- Ovens
- Dryers
- Plastics
- Glass
- Wood
- Minerals
- Ceramics
- Textiles
- Rubber
- Gypsum board
- Food production



For outdoor/harsh applications



Dimensions in mm



PSC-T42L FEATURES

- Wide temperature range: -40 to 1000°C (-40 to 1832°F)
- Simple installation with 2-wire, loop powered IR sensor
- 4 - 20 mA output
- Protective cooling/air purge assemblies for harsh industrial applications (IP65 rated)
- On-board emissivity adjustment
- High resolution optics
- Variety of fixed focus optics
- Stainless steel housing



ORDERING INFORMATION

Part Number	Description
PSC-T42L	PSC Model T42L Sensor, Manual, Inspection Sheet, 2 Mounting Screw Nuts

ACCESSORIES

Part Number	Description
PSC-3310A21011	Mounting Angle, Adjustable
PSC-3310A21210	Window Slide (Without Window)
PSC-3310A22010	Air Purge Unit
PSC-3310A23010	Standard Cooling Jacket
PSC-3310A23015	Sealed Stainless Steel End Cap for Cooling Jacket
950-004	Power Supply
	Digital Temperature Display with 4-20mA Re-Transmitted output and a Laser Switch in Wall Mount FiberGlass Enclosure
	Digital Temperature Display
	Connecting Cables in 2, 5, 10, 15, 20 or 30 m



SPECIFICATIONS

Temperature Range	-40°C to 1000°C (-40°F to 1832°F)*
Spectral Range	8 µm to 14 µm
Sub Temperature Range	Adjustable Within Temperature Range, Minimum Span 50°C (122°F)
Focus Optics	300, 2000
Measurement Accuracy	1 % of Measured Value in °C
Repeatability ¹	0.5 % Of Measured Value °C
NETD ²	< 0.1 C ³
Response Time	100 ms, Optional Adjustable Up to 100 s (Factory-Provided)
Emissivity	0.20 to 1.00, Adjustable (Factory Setting: 1.00)
Output	4 to 20 mA, Temperature Linear, Max. Load: 500 Ohms At 24 V
Power Supply	24 VDC ± 25 %, Residual Ripple 500 mV
Power Consortium	Max. 0.6 W
Operating Temperature	0°C to 70°C (32°F to 158°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Weight	Appr. 450 G (15.87 oz)
Dimensions	Length 4.92in (125mm), Thread M40x1.5
Housing	Stainless Steel with Plug Connector
Safety Class	IP 65 (According to DIN En 60529 and DIN 40050)
CE Symbol	According To Eu Regulations

¹ Details for black body radiator, Tu = 23°C, t95 = 1 s. ² Noise equivalent temperature difference. ³ At Tu = 23°C, Tobject DT 42L = 100°C, Tobject DT 42G = 250°C respectively 700°C
 *Temperature range can be factory preset to a sub temperature range within the selected IR sensor's overall temperature range span. Minimum temperature span is 50°C. The temperature range cannot be changed in the field.

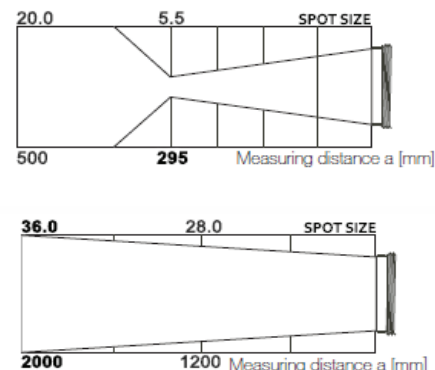
FOCUS OPTIC TYPES

Optics 300 (focal point at a = 295 mm measuring distance), aperature D = 15 mm

Measuring distance a [mm]	0	100	200	260	295	400	500
PSC-T42L spot size	15.0	11.8	8.6	6.6	5.5	13.0	20.0

Optics 2000 (focal point at a = 2000 mm measuring distance), aperature D = 15 mm

Measuring distance a [mm]	0	800	1200	1800	2000	3000	4000
PSC-T42L spot size	15.0	24.0	28.0	34.0	36.0	57.0	80.0



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